

Markhor Junior Contest ®

Pioneer Level (Class VII & VIII) Science 2013

There are 25 questions, and each question carries two marks.

1. **Which of these best shows that science is self-correcting?**
 - a) Scientists always agree on everything.
 - b) Once a law is made, it cannot be changed.
 - c) New evidence can modify or replace old theories.**
 - d) Scientists avoid repeating experiments
2. **Why is STEM important for solving global challenges like climate change?**
 - a) It avoids the use of technology.
 - b) It combines knowledge and innovation to create sustainable solutions.**
 - c) It only focuses on math.
 - d) It depends only on science facts
3. **Alexander Fleming's accidental discovery of penicillin showed the importance of:**
 - a) Strong microscopes
 - b) Careful observation and openness to unexpected results**
 - c) The electric current
 - d) Vaccine production
4. **During photosynthesis, oxygen is released as a by-product. This oxygen comes from:**
 - a) Carbon dioxide
 - b) Water molecules**
 - c) Glucose
 - d) Sunlight
5. **Why are energy pyramids usually pyramid-shaped?**
 - a) Because organisms are larger at the top.
 - b) Because producers are few in number.
 - c) Because energy decreases as you move up trophic levels.**
 - d) Because decomposers are at the bottom
6. **The chance of getting heads in a coin toss is similar to:**
 - a) Mutation
 - b) Probability of traits in genetics**
 - c) Evolution
 - d) Protein synthesis
7. **Which of the following diseases is non-communicable?**
 - a) Tuberculosis
 - b) Measles

Markhor Junior Contest ®

- c) Typhoid
 - d) **Cancer**
8. Which is the first and simplest line of defense against disease spread in schools?
- a) Antibiotics
 - b) Surgery
 - c) **Handwashing and good hygiene**
 - d) Vaccination only
9. Why is biodiversity important?
- a) It makes only humans survive
 - b) **It maintains balance in ecosystems**
 - c) It reduces the need for plants
 - d) It stops food chains
10. Noise pollution mainly affects:
- a) Lungs
 - b) Stomach
 - c) **Ears and nervous system**
 - d) Bones
11. Which of the following is a greenhouse gas?
- a) Oxygen
 - b) **Nitrous oxide (N₂O)**
 - c) Argon
 - d) Helium
12. Which of these is an example of a non-renewable metallic resource?
- a) Forests
 - b) Sunlight
 - c) **Iron ore**
 - d) Wind
13. Which practice conserves soil in sustainable farming?
- a) Deforestation
 - b) Over-irrigation
 - c) **Terracing on hillsides**
 - d) Overgrazing
14. Which property is common among noble gases?
- a) Highly reactive
 - b) **Chemically inert (unreactive)**
 - c) Strong metals
 - d) Easily form compounds

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15. Which of the following is a metallic property?

- a) Poor conductor of heat
- b) Low melting point
- c) Malleable and ductile**
- d) Easily breaks

16. Which of the following is a neutralization reaction?

- a) $\text{Ca} + 2\text{H}_2\text{O} \rightarrow \text{Ca}(\text{OH})_2 + \text{H}_2$
- b) $\text{Mg} + \text{O}_2 \rightarrow \text{MgO}$
- c) $\text{H}_2\text{SO}_4 + \text{KOH} \rightarrow \text{K}_2\text{SO}_4 + \text{H}_2\text{O}$**
- d) $\text{Zn} + \text{CuSO}_4 \rightarrow \text{ZnSO}_4 + \text{Cu}$

17. Which of the following is a strong acid?

- a) Baking soda
- b) Ammonia
- c) Hydrochloric acid (HCl)**
- d) Soap

18. Which of the following can be separated using a magnet?

- a) Salt and sugar
- b) Water and alcohol
- c) Iron filings and sand**
- d) Oil and water

19. If a force of 20 N is applied to a 4 kg object, its acceleration will be:

- a) 2 m/s^2
- b) 4 m/s^2
- c) 5 m/s^2**
- d) 10 m/s^2

20. Which form of energy is associated with position or height?

- a) Kinetic energy
- b) Gravitational potential energy**
- c) Thermal energy
- d) Sound energy

21. Which property of sound determines how loud it is?

- a) Wavelength
- b) Amplitude**
- c) Frequency
- d) Speed

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22. Which type of lens is used in telescopes to collect light?
- a) Concave lens
 - b) Diverging lens
 - c) **Convex lens**
 - d) Plane glass
23. Which of the following is an example of biotechnology?
- a) **Making yogurt using bacteria**
 - b) Boiling water
 - c) Melting metals
 - d) Using electricity
24. The first electron shell of an atom can hold how many electrons?
- a) **2**
 - b) 4
 - c) 6
 - d) 8
25. Humans inherit half of their chromosomes from each parent. How many chromosomes does a child get from the mother?
- a) **23**
 - b) 46
 - c) 12
 - d) 24